

REMARKS

Claims 1-5 and 19-22 are pending in this application after this Amendment. Claims 1, 21, and 22 are independent. Claims 6-18 are cancelled without prejudice or disclaimer to the subject matter included therein. In light of the amendments and remarks included herein, Applicants respectfully request reconsideration and withdrawal of the outstanding rejections.

In the outstanding Official Action, the Examiner rejected claim 3 under 35 U.S.C. § 112, first paragraph. The Examiner further rejected claims 1-3 under 35 U.S.C. § 102(b) as being anticipated by *Ishida et al.* (USP 5,396,042); rejected claim 4 under 35 U.S.C. §103(a) as being unpatentable over *Ishida et al.* in view of *Takatori et al.* (USP 4,499,480); and rejected claim 5 under §103(a) as being unpatentable over *Ishida et al.* in view of *Okuda et al.* (U.S. Patent Application Publication No. 2002/0180831). Applicants respectfully traverse these rejections.

By this Amendment, Applicants have amended the claims to more appropriately recite the present invention. It is respectfully submitted that these amendments are being made without conceding the propriety of the Examiner's rejection, but merely to timely advance prosecution of the present application. Exemplary support for the amendments made in claim 4 may be found on page 21, second paragraph and page 24, lines 12-23.

Claim Rejections – 35 U.S.C. §112

The Examiner rejected claim 3 asserting the originally filed specification is not enabling as to what relative roughness encompasses. Applicants respectfully submit that claim 3 does not recite "relative roughness." As such, it is respectfully requested that outstanding rejection be withdrawn.

It is respectfully submitted that the term "relative roughness" is well known in the art and is defined by the average height of surface irregularities of the surface of the pipe divided by the

diameter of the pipe. As a relative roughness is a term of art and is known to one of ordinary skill, Applicants respectfully submit that the specification is properly enabled.

Claim Rejections – 35 U.S.C. §102

By this Amendment, Applicants have amended claim 1 to recite a pattern formation apparatus comprising at least one combining layer, provided between the substrate and the top plate, and at least one combining layer having one or more melted portions via which the substrate and the top plate are combined with each other.

The Examiner rejects claim 1 asserting *Ishida et al.* discloses all of the elements as claimed. Applicants respectfully submit that *Ishida et al.* teaches joining a head base to a vibrating plate by anodic bonding. Anodic bonding does not involve melting the materials to be bonded, but rather involves migration of ions in an applied field. As such, Applicants respectfully submit that *Ishida et al.* fails to teach or suggest the at least one combining layer, provided between the substrate and the top plate, the at least one combining layer having one or more melted portions by which the substrate and the top plate are combined with each other, as recited in claim 1. It is respectfully requested that the outstanding rejection be withdrawn.

It is respectfully submitted that claims 2-5 and 19-20 are allowable for the reasons set forth above with regard to claim 1 at least based upon their dependency on claim 1. Further, Applicants have submitted new claims 21-22 for consideration by the Examiner. It is respectfully submitted that these new claims are not anticipated by the teachings of *Ishida et al.*

Conclusion

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Catherine M. Voisinet (Reg. No. 52,327) at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

Application No. 10/820,113
Amendment dated April 27, 2006
Reply to Office Action of January 27, 2006

Docket No.: 1248-0714PUS1

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

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Respectfully submitted,

By 

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